I Claim:

1. A method for forming an opening in a light-absorbing layer on a mask, comprising the following steps:

providing the mask, the mask having a substrate on which the light-absorbing layer is arranged;

applying a first resist on the light-absorbing layer;

applying a second resist above the first resist;

first exposing the second resist by irradiation of the mask in a first segment;

first developing of the second resist to form a first opening in the developed second resist, so that the first resist is uncovered on an area within the opening;

second exposing of the first resist by irradiation of the mask in a second segment which is laterally offset with respect to the first opening so that an incomplete portion of the area of the uncovered first resist is exposed within the opening;

second developing of the first resist to form a second opening in the developed first resist below the first opening;

etching of the light-absorbing layer to form the opening in the light-absorbing layer; and

removing the developed first and the second resist.

2. The method as claimed in claim 1, wherein the first resist

a) is photosensitive with respect to light having a first wavelength that is radiated in,

b) is not photosensitive with respect to light having a second wavelength that is radiated in,

the second resist,

a) is photosensitive with respect to light having the second wavelength that is radiated in,

b) is not photosensitive with respect to light having the first wavelength that is radiated in,

light having the first wavelength is used during the first exposure, and

light having the second wavelength is used during the second exposure.

3. The method as claimed in claim 2, wherein light having a wavelength of 248 nanometers is used for the first exposure and light having a wavelength of 365 nanometers is used for the second exposure.

4. The method as claimed in claim 2, wherein light having a wavelength of 248 or 348 nanometers is used for the first exposure and an electron or ion beam is used for the second exposure.

5. The method as claimed in claim 1, wherein the first and the second development are carried out using an identical developer solution in an uninterrupted process step.

6. The method as claimed in claim 5, wherein a negative resist is used for the second resist so that, during the first development, non-exposed resist portions are stripped out in order to form the first opening.

7. The method as claimed in claim 1, wherein the second resist is removed before the etching step.

8. The method as claimed in claim 1, wherein an antireflection layer is arranged on the first resist between the application of the first resist and the application of the second resist.

9. The method as claimed claim 1, wherein a first mask writer having a resolution limit which can be achieved on the mask in the course of writing with a beam is used for the second exposure of the second segment, and the second segment is exposed on the mask with a diameter of between one and one and a half the resolution limit that can be achieved with the mask writer.

10. The method as claimed in claim 9, wherein a second mask writer having a further resolution limit that can be achieved on the mask in the course of writing with a beam is used for the first exposure of the first segment, and the first segment is exposed on the mask with a diameter of between one and one and a half times the further resolution limit that can be achieved with the second mask writer.

11. The method as claimed in claim 2, wherein light having a wavelength of 365 nanometers is used for the first exposure and light having a wavelength of 248 nanometers is used for the second exposure.

12. The method as claimed in claim 2, wherein an electron or ion beam is used

for the first exposure and light having a wavelength of 248 or 365 nanometers is used for the second exposure.